

NONTECHNICAL SOIL DESCRIPTIONS
GILMER COUNTY, WEST VIRGINIA
AGRONOMIC (AGR)
Basic Soils (SOI)
GRASSLAND SUITABILITY GROUPS (GSG)

Ka - Kanawha loam

AGR - This soil is suited to cultivated crops and to hay and pasture. The hazard of erosion, which is moderate in unprotected areas, is a management concern. If the soil is cultivated, using a conservation tillage system, farming on the contour, using a crop sequence that includes hay, and returning crop residue to the soil help to control erosion and to maintain fertility and tilth. If this soil is used for pasture, the major management needs include rotational grazing and proper stocking rates to maintain desirable grasses and legumes.

SOI - These Kanawha soils are very deep (greater than 6 feet to bedrock), well drained soils that formed in alluvial high bottom sediments. They have medium to moderately coarse textured surface layer and generally a medium textured subsoil. Estimated permeability is moderate (0.6 to 2.0 inches per hour). These soils have a rare flood hazard in areas not protected from flooding. They are flooded only when flood waters are at their highest. Consult the Army Corps of Engineers for more specific information on flooding frequency. Natural fertility is high and available water capacity is high.

GSG - Moist Loams Deep and very deep, well drained soils with high natural fertility. High moisture holding capacity and pH is normally greater than 5.3. Slope ranges from 0 to 25 percent. Annual precipitation is 41 to 50 inches.

Cg - Chagrin loam

AGR - This soil is suited to cultivated crops and to hay and pasture. Cultivated crops can be grown continuously, but the soil needs the protection of a cover crop. Working the residue from the cover crop into the soil helps to maintain fertility and tilth. In places, crops are subject to damage from flooding. If this soil is used for pasture, the major management needs include rotational grazing and proper stocking rates to maintain desirable grasses and legumes, and deferment of grazing in the spring until the soil is reasonably firm.

SOI - These Chagrin soils are very deep, well drained, and have formed in recent alluvial sediments along major streams. The Chagrin soils have a moderate permeability (0.6 to 2.0 inches per hour). They generally have a medium soil texture in the surface and subsoil. Bedrock is generally at depths greater than 5 feet. These soils are generally subject to occasional flooding. Natural fertility is high and available water capacity is high.

GSG - Moist Loams Deep and very deep, well drained soils with high natural fertility. High moisture holding capacity and pH is normally greater than 5.3. Slope ranges from 0 to 25 percent. Annual precipitation is 41 to 50 inches.

Sb - Sensabaugh loam

AGR - This soil is suited to cultivated crops and to hay and pasture. Cultivated crops can be grown continuously but the soil needs the protection of a cover crop. Working the residue from the cover crop into the soil helps to maintain fertility and tilth. In places, crops are subject to damage from flooding. If this soil is used for pasture, the major management needs include rotational grazing and proper stocking rates to maintain desirable grasses and legumes, and deferment of grazing until the soil is reasonably firm.

SOI - These Sensabaugh soils are generally very deep (greater than 5 feet to bedrock), well drained soils found mostly on bottomland floodplains along small stream. These soils have a medium textured surface and a medium textured gravelly subsoil. The estimated soil permeability is moderate to moderately rapid (0.6 to 6.0 inches per hour). Sensabaugh soils have a gravel layer (15 to 45 percent rock fragments) at depths ranging from 20 to 40 inches. They generally flood occasionally with an exception of high bottoms or alluvial fan areas having a rare flood hazard. Natural fertility is moderate or high and available water capacity is high.

GSG - Moist Loams Deep and very deep, well drained soils with high natural fertility. High moisture holding capacity and pH is normally greater than 5.3. Slope ranges from 0 to 25 percent. Annual precipitation is 41 to 50 inches.

FpE - Fairpoint channery clay loam, steep, very stony

AGR - These soils are not suited to cultivated crops or hay and are difficult to manage for pasture. They are better suited to woodland or wildlife uses.

SOI - These Fairpoint soils are well drained and very deep soils that have formed in disturbed acid and calcareous rock and soil material resulting from the surface mining of coal. They have a medium textured channery surface and medium to moderately fine textured extremely channery substrata. The estimated soil permeability ranges from moderate to moderately slow (.2 to 2.0 inches per hour). The Fairpoint soil is uncompacted and maybe subject to slippage on slopes of 15 percent or greater. Rock fragments range from 35 to 60 percent by volume in the substrata. The very stony (1 to 15 percent) surface stones ranging in size of 10 to 25 inches. Bedrock is generally at depths of greater than 60 inches except where bedrock escarpments are present along mining high wall. Natural fertility is moderate to high and available water capacity is moderate. This unit may include areas of natural soils between strip benches or around edge of unit.

GSG - Limy Hills Moderately deep, well drained soils with moderate to high natural fertility. Low moderate moisture holding capacity and pH is normally greater than 5.3. Slope ranges from 25 to 45 percent or 15 to 35 percent if severely eroded. Annual precipitation is 41 to 50 inches.

GpF3 - Gilpin-Peabody complex, 35 to 70 percent slopes, severely eroded, very stony

AGR - These soils are not suited to cultivated crops, hay, or pasture because of slope, surface stones and inclusions of rock outcrops that generally make these soils unsuitable for farming.

SOI - This Gilpin-Peabody soil complex consists of Gilpin and Peabody soils which are intermixed in such an intricate pattern that they cannot be separated in mapping at this scale. Soil slips and shallow gullies are found in some areas of this severely eroded unit. Gilpin soils are moderately deep, well drained soils which formed from acid shale, siltstone, and sandstone. They have medium textured surface and medium to moderately fine textured subsoil. Estimated soil permeability is moderate (0.6 to 2.0 inches per hour). Bedrock is at depths of 20 to 40 inches. The bedrock is generally rippable with light power equipment. Natural fertility of the Gilpin soil is low or moderate and available water capacity is low or moderate. Peabody soils are moderately deep well drained soils which formed in clay shale and interbedded siltstone. They have moderate to moderately fine textured surface and moderately fine to fine textured subsoils which become sticky and plastic when wet. Estimated soil permeability is moderately slow to slow (0.6 to 0.06 inches per hour). The depth to bedrock is generally at depths ranging from 20 to 40 inches and rippable with light power equipment. Natural fertility of the Peabody soil is moderate or high and available water capacity is moderate. The Peabody soils have a slip hazard, especially on slopes greater than 8 percent. The subsoil is highly susceptible to shrinking when dry and swelling when wet.

GSG - Acid Hills Moderately deep, deep, very deep moderately well and well drained soils with low natural fertility. Moderate to high soil moisture holding capacity and pH is normally less than 5.3. Slope ranges 25 to 60 percent or 25 to 45 percent if severely eroded. Annual precipitation is 41 to 50 inches.

GsF - Gilpin-Pineville complex, 35 to 70 percent slopes, very stony

AGR - These soils are not suited to cultivated crops, hay, or pasture because of slope, surface stones and rock outcrops that generally make these soils unsuitable for farming.

SOI - This Gilpin-Pinville complex consists of intermixed Gilpin and Pineville soils. Stones that are 10 to 24 inches in diameter cover 1 to 3 percent of the soil surface. These soils are so intermixed in a complex pattern that they cannot be separated in mapping at this scale. Gilpin soils are moderately deep, well drained soils which formed from acid shale, siltstone, and sandstone. They have medium textured surface and medium to moderately fine textured subsoil. Estimated soil permeability is moderate (0.6 to 2.0 inches per hour). Bedrock is at depths of 20 to 40 inches. The bedrock is generally rippable with light power equipment. Natural fertility of the Gilpin soil is low or moderate and available water capacity is low or moderate. Pineville soils are very deep, well drained soils formed in colluvial sediments on sideslopes. These Pineville soils have medium surface and subsurface textures. The depth to bedrock is greater than 65 inches. Estimated soil permeability is moderate (0.6 to 2.0 inches per hour). Natural fertility of the Pineville soil is low to moderate and available water capacity is moderate to high. These soils may have included areas of rock-outcrops.

GSG - Very Rocky Acid Soils Moderately deep, deep, and very deep well drained soils with low natural fertility. Moderate to high soil moisture holding capacity and pH is normally below 5.3. Slope ranges from 0 to 25 percent. Soils in this group have a very cobbly, very stony, or very rocky surface. Annual precipitation is 41 to 50 inches.

GuC3 - Gilpin-Upshur complex, 8 to 15 percent slopes, severely eroded

AGR - These soils have limited suitability for cultivated crops and are better suited to hay and pasture. The hazard of erosion, which is very severe in unprotected areas, is a major management concern. Using a conservation tillage system, growing crops in contour strips, using a crop sequence that includes hay, and returning crops residue to the soil help to control erosion and to maintain fertility and tilth. If these soils are used for pasture, the major management needs include proper stocking rates to maintain desirable grasses and legumes, rotational grazing, and deferment of grazing until the Upshur soil is reasonably firm.

SOI - This Gilpin-Upshur complex soil unit consists of Gilpin and Upshur soils which are intermixed in such an intricate pattern that they cannot be separated in mapping at this scale. Soil slips and shallow gullies are found in some areas of this severely eroded unit. Gilpin soils are moderately deep, well drained soils which formed from acid shale, siltstone, and sandstone. They have medium textured surface and medium to moderately fine textured subsoil. Estimated soil permeability is moderate (0.6 to 2.0 inches per hour). Bedrock is at depths of 20 to 40 inches. The bedrock is generally rippable with light power equipment. Natural fertility of the Gilpin soil is low or moderate and available water capacity is low or moderate. Upshur soils are deep well drained soils which formed in limy material weathered from red and olive shale. They have moderately fine textured surface and fine textured subsoils which become sticky and plastic when wet. Estimated soil permeability is very slow (less than 0.2 inches per hour). The depth to bedrock is generally at depths of 40 to 60 inches and is rippable with light power equipment. Natural fertility of the Upshur soil is moderately high and available water capacity is moderate to high. Upshur soils have a slip hazard, especially on slopes greater than 8 percent. Their subsoil are highly susceptible to shrinking when dry and swelling when wet.

GSG - Acid Loams Moderately deep, deep, and very deep moderately well and well drained with low natural fertility. Moderate to high soil moisture holding capacity and pH is normally less than 5.3. Slope ranges from 0 to 25 percent. Annual precipitation is 41 to 50 inches.

GuD3 - Gilpin-Upshur complex, 15 to 25 percent slopes, severely eroded

AGR - These soils are not suited to cultivated crops or hay, but are suited to pasture. The hazard of erosion is very severe in unprotected areas and is a major management concern. If these soils are used for pasture, overgrazing can result in more severe erosion. Proper stocking rates to maintain desirable grasses and legumes, rotational grazing, and deferment of grazing until the Upshur soil is reasonably firm are major pasture management needs.

SOI - This Gilpin-Upshur complex soil unit consists of Gilpin and Upshur soils which are intermixed in such an intricate pattern that they cannot be separated in mapping at this scale. Soil slips and shallow gullies are found in some areas of this severely eroded unit. Gilpin soils are moderately deep, well drained soils which formed from acid shale, siltstone, and sandstone. They have medium textured surface and medium to moderately fine textured subsoil. Estimated soil permeability is moderate (0.6 to 2.0 inches per hour). Bedrock is at depths of 20 to 40 inches. The bedrock is generally rippable with light power equipment. Natural fertility of the Gilpin soil is low or moderate and available water capacity is low or moderate. Upshur soils are deep well drained soils which formed in limy material weathered from red and olive shale. They have moderately fine textured surface and fine textured subsoils which become sticky and plastic when wet. Estimated soil permeability is very slow (less than 0.2 inches per hour). The depth to bedrock is generally at depths of 40 to 60 inches and is rippable with light power equipment. Natural fertility of the Upshur soil is moderately high and available water capacity is moderate to high. Upshur soils have a slip hazard, especially on slopes greater than 8 percent. Their subsoil are highly susceptible to shrinking when dry and swelling when wet.

GSG – Acid Loams Moderately deep, deep, and very deep moderately well and well drained with low natural fertility. Moderate to high soil moisture holding capacity and pH is normally less than 5.3. Slope ranges from 0 to 25 percent. Annual precipitation is 41 to 50 inches.

GuE3 – Gilpin-Upshur complex, 25 to 35 percent slopes, severely eroded

AGR – These soils are not suited to cultivated crops or hay and are difficult to manage for pasture. The hazard of erosion is very severe in unprotected areas. Bare areas are difficult to revegetate, but they should be seeded to permanent cover. Mulching will help protect seeded areas until the plants become established.

SOI – This Gilpin-Upshur complex soil unit consists of Gilpin and Upshur soils which are intermixed in such an intricate pattern that they cannot be separated in mapping at this scale. Soil slips and shallow gullies are found in some areas of this severely eroded unit. Gilpin soils are moderately deep, well drained soils which formed from acid shale, siltstone, and sandstone. They have medium textured surface and medium to moderately fine textured subsoil. Estimated soil permeability is moderate (0.6 to 2.0 inches per hour). Bedrock is at depths of 20 to 40 inches. The bedrock is generally rippable with light power equipment. Natural fertility of the Gilpin soil is low or moderate and available water capacity is low or moderate. Upshur soils are deep well drained soils which formed in limy material weathered from red and olive shale. They have moderately fine textured surface and fine textured subsoils which become sticky and plastic when wet. Estimated soil permeability is very slow (less than 0.2 inches per hour). The depth to bedrock is generally at depths of 40 to 60 inches and is rippable with light power equipment. Natural fertility of the Upshur soil is moderately high and available water capacity is moderate to high. Upshur soils have a slip hazard, especially on slopes greater than 8 percent. Their subsoil are highly susceptible to shrinking when dry and swelling when wet.

GSG – Acid Hills Moderately deep, deep, very deep moderately well and well drained soils with low natural fertility. Moderate to high soil moisture holding capacity and pH is normally less than 5.3. Slope ranges 25 to 60 percent or 25 to 45 percent if severely eroded. Annual precipitation is 41 to 50 inches.

Ha – Hackers silt loam

AGR – This soil is well suited to cultivated crops and to hay and pasture. Cultivated crops can be grown continuously, but the soil needs the protection of a cover crop. Working the residue from the cover crop into the soil helps to maintain fertility and tilth. If this soil is used for pasture, the major management needs include rotational grazing and proper stocking rates to maintain desirable grasses and legumes.

SOI - These Hackers soils are deep (greater than 5 feet to bedrock), well drained soils that formed in alluvial high bottom sediments. They have medium textured surface layer and a medium to moderately fine textured subsoil. Estimated permeability is moderate (0.6 to 2.0 inches per hour). These soils have a rare flood hazard and they are flooded only when flood waters are at their highest. Natural fertility is high and available water capacity is high.

GSG - Moist Loams Deep and very deep, well drained soils with high natural fertility. High moisture holding capacity and pH is normally greater than 5.3. Slope ranges from 0 to 25 percent. Annual precipitation is 41 to 50 inches.

ItE - Itmann channery clay loam, steep

AGR - These Udorthents are not suited to cultivated crops or hay, and are difficult to manage for pasture. Slope restricts the use of farm machinery. If this soil is used for pasture, the major management needs include proper stocking rates to maintain desirable grasses and legumes, rotational grazing, and deferment of grazing in the spring until the soil is reasonably firm.

SOI - This Itmann soil is very deep and somewhat excessively drained soil. This soil has developed in coal and high carbon shale refuse from deep mining for coal. These soils have mostly been reclaimed with 6 to 20 inches of natural soil covering the black carbolic mine refuse. The Itmann soil has a medium to moderately fine channery textured surface and medium very channery textured substratum. The medium textured very channery subsoil has a moderately rapid to rapid permeability (2.0 to 20 inches per hour). Bedrock is generally at depths greater than 65 inches. Natural fertility is very low and available water capacity is low to moderate. Slippage or slumping of the topsoiled material occurs on steeper areas.

GSG - Not Suited All other soils that have a combination of soil properties and climate limitations that make them not suited for forage production because adequate growth for forage use plus soil stabilization is normally not possible.

JnE - Janelew channery silt loam, steep

AGR - These soils are not suited to cultivated crops or hay and are difficult to manage for pasture. They are better suited to woodland or wildlife uses.

SOI - These Janelew soils are well drained and very deep soils that have formed in disturbed calcareous rock and soil material resulting from the surface mining of coal. They have a medium textured channery surface and medium to moderately fine textured extremely channery substrata. The estimated soil permeability ranges from moderate to moderately slow (.2 to 2.0 inches per hour). The Janelew soil is subject to slippage on slopes of 15 percent or greater. Bedrock is generally at depths of greater than 65 inches except where bedrock escarpments are present along mining high wall. Natural fertility is moderate to high and available water capacity is moderate. This unit may include areas of natural soils between strip benches or around edge of unit.

GSG - Limy Hills Moderately deep, well drained soils with moderate to high natural fertility. Low moderate moisture holding capacity and pH is normally greater than 5.3. Slope ranges from 25 to 45 percent or 15 to 35 percent if severely eroded. Annual precipitation is 41 to 50 inches.

MoB - Monongahela silt loam, 3 to 8 percent slopes

AGR - This soil is suited to cultivated crops and to hay and pasture. The hazard of erosion, which is moderate in unprotected areas, is a management concern. If this soil is cultivated, farming on the contour, using a crop sequence that included hay, and returning crop residue to the soil help to control erosion and to maintain fertility and tilth. If this soil is used for pasture, the major management needs include proper stocking rates to maintain desirable grasses and legumes, rotational grazing, and deferment of grazing in the spring until the soil is reasonably firm.

SOI - These Monongahela soils are very deep, moderately well drained soils on high stream terraces. They have medium textured surface layers and medium to moderately fine textured subsoils. Monongahela soils have a firm and brittle fragipan layer 18 to 30 inches below the surface, which has slow (estimated 0.06 to 0.2 inches per hour) permeability. They have a seasonal high water table at 18 to 30 inches below the surface. Bedrock is generally at depths greater than 5 feet. Natural fertility is low and available water capacity is moderate.

GSG - Acid Loams Moderately deep, deep, and very deep moderately well and well drained with low natural fertility. Moderate to high soil moisture holding capacity and pH is normally less than 5.3. Slope ranges from 0 to 25 percent. Annual precipitation is 41 to 50 inches.

MoC - Monongahela silt loam, 8 to 15 percent slopes

AGR - This soil is suited to cultivated crops and to hay and pasture. The hazard of erosion, which is severe in unprotected areas, is a management concern. Using a conservation tillage system, growing crops in contour strips, using a crop sequence that includes hay, and returning crop residue to the soil help to control erosion and to maintain fertility and tilth. If this soil is used for pasture, the major management needs include proper stocking rates to maintain desirable grasses and legumes, rotational grazing, and deferment of grazing in the spring until the soil is reasonably firm.

SOI - These Monongahela soils are very deep, moderately well drained soils on high stream terraces. They have medium textured surface layers and medium to moderately fine textured subsoils. Monongahela soils have a firm and brittle fragipan layer 18 to 30 inches below the surface, which has slow (estimated 0.06 to 0.2 inches per hour) permeability. They have a seasonal high water table at 18 to 30 inches below the surface. Bedrock is generally at depths greater than 5 feet. Natural fertility is low and available water capacity is moderate.

GSG - Acid Loams Moderately deep, deep, and very deep moderately well and well drained with low natural fertility. Moderate to high soil moisture holding capacity and pH is normally less than 5.3. Slope ranges from 0 to 25 percent. Annual precipitation is 41 to 50 inches.

PvE - Pineville loam, 25 to 35 percent slopes, very stony

AGR - These stony soils are not suited to cultivated crops or hay and are difficult to manage for pasture. The erosion hazard is very severe in unprotected areas.

SOI - These Pineville soils are very deep, well drained soils formed in colluvial sediments on footslopes and in coves. These Pineville soils have medium surface and subsurface textures. The depth to bedrock is greater than 65 inches. Estimated soil permeability is moderate (0.6 to 2.0 inches per hour). Natural fertility of the Pineville soil is low to moderate and available water capacity is moderate to high. Stones that are 10 to 24 inches in diameter cover 1 to 3 percent of the surface.

GSG - Very Rocky Acid Soils Moderately deep, deep, and very deep well drained soils with low natural fertility. Moderate to high soil moisture holding capacity and pH is normally below 5.3. Slope ranges from 0 to 25 percent. Soils in this group have a very cobbly, very stony, or very rocky surface. Annual precipitation is 41 to 50 inches.

Ud - Udorthents, smoothed

AGR - These Udorthents are not suited to cultivated crops or hay, but have a limited suitability for pasture on some areas. They are better suited to woodland or wildlife.

SOI - This Udorthents, smoothed unit is a miscellaneous area of disturbed soil material, that is too variable to assign any specific soil properties. The miscellaneous soil area ranges from dominantly clay to loam soil with or without rock material ranging from a few gravels to a massive bedrock escarpment.

GSG - Not Suited All other soils that have a combination of soil properties and climate limitations that make them not suited for forage production because adequate growth for forage use plus soil stabilization is normally not possible.

VaD - Vandalia silt loam, 15 to 25 percent slopes

AGR - This soil has limited suitability for cultivated crops. It is better suited to hay or pasture. The hazard of erosion, which is severe in unprotected areas, is a major management concern. Using a conservation tillage system, growing crops in contour strips, maintaining sod in shallow drainageways, using a crop sequence that includes hay, and returning crop residue to the soil help to control erosion and to maintain fertility and tilth. If this soil is used for pasture, the major management needs include proper stocking rates to maintain desirable grasses and legumes, rotational grazing, and deferment of grazing in the spring until the soil is reasonably firm.

SOI - These Vandalia soils are well drained, red soils on colluvial footslopes. They have a moderately fine textured surface and a fine textured subsoil. Estimated permeability is moderately slow to slow (0.6 to 0.06 inches per hour). Vandalia soils have a slip hazard, especially when slopes are greater than 8%. Their subsoils are highly susceptible to shrinking when drying and swelling upon wetting. Bedrock is generally at depths greater than 5 feet. Natural fertility is moderate or high and available water capacity is moderate or high.

GSG - Fertile Loams Moderately deep, deep, and very deep moderately well and well drained soils with moderate natural fertility. Moderate soil moisture holding capacity and pH is normally greater than 5.3. Slope ranges from 0 to 25 percent. Annual precipitation is 41 to 50 inches.

VsE - Vandalia silt loam, 15 to 35 percent slopes, very stony

AGR - This extremely stony soil is not suited to cultivated crops or hay, but is somewhat suited to pasture. Stones restrict the use of farm machinery. The hazard of erosion, which is severe in unprotected areas, is a major management concern. If this soil is used for pasture, the major management needs include removal of surface stones, proper stocking rates to maintain desirable grasses and legumes, rotational grazing, and deferment of grazing in the spring until the soil is reasonably firm.

SOI - These Vandalia stony soils are well drained, red soils on colluvial footslopes. These Vandalia stony units have 1 to 3 percent stone cover on the surface with some included bouldery areas. They have a moderately fine textured surface and a fine textured subsoil. Estimated permeability is moderately slow to slow (0.6 to 0.06 inches per hour). Vandalia soils have a slip hazard, especially when slopes are greater than 8%. Their subsoils are highly susceptible to shrinking when drying and swelling upon wetting. Bedrock is generally at depths greater than 5 feet. Natural fertility is moderate or high and available water capacity is moderate or high.

GSG - Very Rocky, Limy Soils Moderately deep, deep, and very deep well drained soils with high natural fertility. Moderate to high soil moisture holding capacity and pH is above 5.3. Slope ranges from 25 to 45 percent. Soils in this group have a very cobbly, very stony, or very rocky surface. Annual precipitation is 41 to 50 inches.